

## WHAT IS CLAIMED IS:

1. A method of demosaicing and resizing a mosaiced image comprising:  
receiving a current image block of said mosaiced image;  
5 computing an indicator of said current image block based on color  
data of said current image block; and  
generating a resized image block from said current image block of  
said mosaiced images in response to said indicator to produce a resized image of  
said mosaiced image, including embedding selected color information from said  
10 current image block of said mosaiced image into said resized image block such  
that said resized image of said mosaiced image is demosaiced.
2. The method of claim 1 wherein said computing of said indicator of said  
current image block includes computing a statistical indicator from said color data  
15 of said current image block.
3. The method of claim 2 wherein said computing of said statistical indicator  
includes computing a variance from said color data of said current image block,  
said variance being used as said statistical indicator.  
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4. The method of claim 3 wherein said computing of said variance from said  
color data of said current image block includes computing said variance from  
values within said current image block for a particular color.
- 25 5. The method of claim 1 wherein said computing of said indicator of said  
current image block includes computing a feature-based indicator from said color  
data of said current image block.
6. The method of claim 5 wherein said computing of said feature-based  
30 indicator includes computing a gradient from said color data of said current image  
block, said gradient being used as said feature-based indicator.

7. The method of claim 6 wherein said computing of said gradient from said color data of said current image block includes computing said gradient from values within said current image block for a particular color.

5 8. The method of claim 1 further comprising dividing said current image block to derive a new current image block when said indicator of said current image block meets a predefined criterion.

9. The method of claim 8 further comprising repeating said computing and  
10 said generating for said new current image block.

10. The method of claim 8 wherein said dividing of said current image block includes dividing said current image block to derive said new current image block when said indicator of said current image block exceeds a predefined threshold.

15 11. The method of claim 1 wherein said embedding of said selected color information from said current image block of said mosaiced image into said resized image block includes embedding the means of color values within said current image block into said resized image block.

20 12. The method of claim 1 where said generating of said resized image block from said current image block of said mosaiced image includes generating a pixel of said resized image from said current image block of said mosaiced image.

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13. A system for demosaicing and resizing a mosaiced image comprising:  
an image processing module that receives a current image block of  
said mosaiced image, said image processing module being configured to generate  
a resized image block from said current image block of said mosaiced image to  
5 produce a resized image of said mosaiced image, said image processing module  
including:  
an indicator computer that is configured to compute an  
indicator of said current image block based on color data of said current image  
block; and  
10 a color inserter that is configured to embed selected color  
information from said current image block of said mosaiced image into said  
resized image block in response to said indicator such that said resized image of  
said mosaiced image is demosaiced.
14. The system of claim 13 wherein said indicator computer is configured to  
compute a statistical indicator from said color data of said current image block.
15. The system of claim 14 wherein said indicator computer is configured to  
compute a variance from said color data of said current image block, said variance  
20 being used as said statistical indicator.
16. The system of claim 13 wherein said indicator computer is configured to  
compute a feature-based indicator from said color data of said current image  
block.
- 25 17. The system of claim 16 wherein said indicator computer is configured to  
compute a gradient from said color data of said current image block, said gradient  
being used as said feature-based indicator.
- 30 18. The system of claim 13 wherein said image processing module is  
configured to divide said current image block to derive a new current image block  
when said indicator of said current image block meets a predefined criterion.

19. The system of claim 18 wherein said indicator computer and said color inserter of said image processing module are configured to compute a new indicator and to embed new selected color information for said new current image block.
- 5 20. The system of claim 13 wherein said color inserter is configured to embed the means of color values within said current image block into said resized image block.
- 10 21. A method demosaicing and resizing a mosaiced image comprising:  
 receiving a current image block of said mosaiced image;  
 computing an indicator of said current image block based on color data of said current image block;  
 comparing said indicator to a threshold;  
 15 dividing said current image block to derive a new current image block of said mosaiced image when said indicator meets a predefined criterion with respect to said threshold; and  
 generating a pixel from said current image block of said mosaiced images when said indicator does not meet said predefined criterion with respect to  
 20 said threshold to produce a resized image of said mosaiced image, including embedding selected color information from said current image block of said mosaiced image into said pixel such that said resized image of said mosaiced image is demosaiced.
- 25 22. The method of claim 21 wherein said computing of said indicator of said current image block includes computing a statistical indicator based on color data of said current image block.
- 30 23. The method of claim 21 wherein said computing of said indicator includes computing a feature-based indicator based on color data of said current image block.

24. The method of claim 21 wherein said embedding of said selected color information from said current image block of said mosaiced image into said pixel includes embedding the means of color values within said current image block into said pixel.

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25. The method of claim 21 further comprising repeating said computing, said comparing, said dividing and said generating for said new current image block of said mosaiced image.

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